

REMARKS*1. Status of claims*

Claims 99-139,141-180, 182-183 and 186-194 are pending.

*2. Claim rejections under 35 U.S.C. §103**a. Speer et al in view of Tellier et al*

Claims 99, 100, 105-109, 114-120, 122-124, 129-134, 138-139, 141-167 and 189-194 stand rejected under 35 U.S.C. §103 as being unpatentable over Speer et al (U.S. 5,399,289) in view of Tellier et al (U.S. 3,632,684). Applicants assert that Tellier is not analogous prior art and therefore cannot form part of an obviousness rejection. M.P.E.P. Sec. 2141.01(a), p. 2100-122. Additionally, Applicants contend that a prima facie case for obviousness has not been made because there is no motivation to combine the cited references. Furthermore, the cited references do not teach or suggest all of the claim limitations. Because a proper case for obviousness has not been presented, Applicants respectfully request that this ground for rejection be withdrawn.

i. Tellier is not analogous prior art

Applicants respectfully submit that Tellier is not analogous prior art and therefore cannot form the basis for an obviousness rejection. The Office Action dated February 24, 2005 states "the patents are analogous because both deal with moldable vinylic copolymers." Office Action Dated February 24, 2005, p. 4. Applicants contend that to identify art as analogous solely based on the malleability of the polymer disclosed is to oversimplify the process. A vast multitude of polymers and polymer classes are moldable at one temperature or another; thus, whether or not a polymer is moldable is not a proper way to identify analogous prior art in the polymer arts.

"In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446 (Fed. Cir. 1992); *In re Ellis*, 476 F.2d 1370, 1372 (C.C.P.A. 1973); M.P.E.P. Sec. 2141.01(a), p. 2100-122. "[S]imilarities and differences in structure and function of the inventions . . . carry far greater weight" in determining what is "analogous prior art." M.P.E.P. Sec. 2141.01(a), p. 2100-122. *See also In re Clay*, 966 F.2d 656 (Fed. Cir. 1992)(inventions were not analogous because reference taught a different structure for a different purpose under different conditions for different applications and person of ordinary skill would not expect to solve the problem of inventor's application by considering information disclosed in the reference).

The functions of the two inventions are different. Applicants' is designed to scavenge oxygen, while Tellier's is designed to be a low molecular weight, low particle size graft copolymer compatible with other molding resins. Similarly, the structures of the two inventions are very different. Applicants' is a non cross-linked ethylenic backboned polymer and Tellier's is a cross-linked polymer. Thus, Tellier can not possibly qualify as analogous prior art. Applicants respectfully submit that the rejection based on obviousness improperly relies on non-analogous art and request that it be withdrawn.

ii. *Prima facie case for obviousness has not been made*

To establish a prima facie case for obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success.

Finally, the prior art references must teach or suggest all of the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vacek*, 947 F.2d 488 (Fed. Cir. 1991); M.P.E.P. Sec. 2142, p. 2100-128.

The Examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. M.P.E.P. Sec. 2142, p. 2100-128. Because there is no motivation to combine the cited references, nor do they teach or suggest all of the claim limitations, Applicants submit that a prima facie case for obviousness has not been made.

1) *No motivation to combine Speer and Tellier*

To successfully make a case for obviousness, there must be some suggestion or motivation to modify or combine the reference teachings to do what Applicants have done. M.P.E.P. Sec. 2142, p. 2100-128. "[T]he references must expressly or impliedly suggest the claimed invention." *Ex parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Inter. 1985); M.P.E.P. Sec. 2142, p. 2100-128. If the motivation to combine is not immediately apparent, an explanation must be provided why the combination of the teachings is proper. *Ex parte Skinner*, 2 U.S.P.Q.2d 1788 (Bd. Pat. App. & Inter. 1986); M.P.E.P. Sec. 2142, p. 2100-129.

The Office Action dated February 24, 2005 states that "the motivation to employ the copolymers of Tellier in the compositions and articles of Speer is found at col. 2, lines 19-22 of Tellier, where improved impact strength is taught." Office Action dated February 24, 2005, p. 4. Applicants respectfully disagree with this statement and submit that there is no express or implied motivation to combine these references.

"There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary

skill in the art.” *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998); M.P.E.P. Sec. 2143.01, p. 2100-129. The nature of the problems solved by Applicants and by Tellier are completely different - an oxygen scavenging polymer vs. a low molecular weight, low particle size graft copolymer compatible with other molding resins. Tellier, Col. 1, lines 60-61. The prior art does not teach or even hint that Tellier’s graft copolymer or the components thereof would be applicable in oxygen scavenging polymers. Finally, one of ordinary skill in the art would not look to Tellier to solve the problem of oxygen scavenging polymers as Tellier does not suggest applicability to polymers that scavenge oxygen.

“The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990); M.P.E.P. Sec. 2143.01, p. 2100-131. Accordingly, Applicants respectfully request that this ground for rejection be withdrawn.

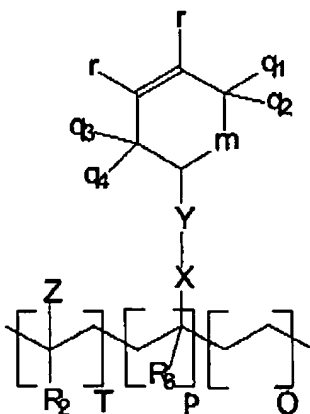
2) *Speer in view of Tellier does not teach all of the claim limitations*

The third criterion for obviousness requires that the combined references teach or suggest all of the claim limitations. The Office Action dated February 24, 2005, states that “Speer teaches compositions and articles (title) that employ, as oxygen scavengers, copolymers of ethylene, vinyl esters and 4-vinyl-cyclohexene” while Tellier “teaches copolymers having pendant group that include cyclohexyl moieties linked to the backbone via C(O)O-CH₂ groups”. However, the combination of the copolymers of Speer and Tellier does not include all the limitations of the present claims.

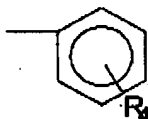
Specifically, the independent claims relate to a compound that, compris[es]

a polymeric backbone, cyclic olefinic pendent groups and linking groups linking the olefinic pendent groups to the polymeric backbone, comprising the formula (II) as follows:

(II)



wherein $P+T+Q$ is 100 mol % of the compound; P, T, and Q are each greater than 0 mol % of the compound; Z is selected from the group consisting of an aryl group; $-(C=O)OR_1$; $-O(C=O)R_1$; and an alkyl aryl group:



where R_4 is selected from the group consisting of $-CH_3$, ethyl, and hydrogen; R_1 is selected from the group consisting of hydrogen, methyl, ethyl, $-C_2H_5$, and $-C_4H_9$; R_2 and R_3 are selected from the group consisting of hydrogen and methyl; X is selected from the group consisting of $-O-$, $-NH-$, $-(C=O)O-$, $-(C=O)NH-$, $-(C=O)S-$, $-O(C=O)-$ and $-(CHR)_L-$; L is an integer in the range from 1 to 6; Y is $-(CHR)_n-$, where n is an integer in the range from 0 to 12, R being selected from the group consisting of hydrogen, methyl and ethyl; where q_1 , q_2 , q_3 , q_4 , and r are selected from the group consisting of hydrogen, methyl, and ethyl; and where m is $-(CH_2)_m-$ and where n is an integer in the range from 0 to 4; and wherein when r is hydrogen, at least one of q_1 , q_2 , q_3 and q_4 is hydrogen.

Neither Speer nor Tellier teaches or suggests this compound. At best, the combination of Speer and Tellier teaches or suggests the mixture of their respective compounds. Therefore, Speer and Tellier do not teach or suggest the oxygen scavenging composition, article of manufacturing, layer suitable for scavenging oxygen, or a process for making a polymer compound included in independent claims 99, 107, 122, 151, and 151.

In regards to independent claim 189, neither Speer nor Tellier teaches or suggests "a terpolymer prepared . . . from ethylene methyl acrylate copolymer." Speer teaches

homopolymers of unsubstituted ethylenically unsaturated hydrocarbons, copolymers of C₁ to C₄ alkyl acrylates and methacrylates with unsubstituted ethylenically unsaturated hydrocarbons, and polymers of ethylene, propylene, styrene, vinyl acetate, and/or other alpha olefins with unsubstituted ethylenically unsaturated hydrocarbons. See Speer column 5, line 42, to column 6, line 12. There is no mention in Speer of a terpolymer prepared from ethylene methyl acrylate copolymer.

Tellier teaches polymers produced from at least three different monomers (ethylene methyl acrylate is produced from only two monomers) including at least one acrylic acid ester of a lower aliphatic alcohol, at least one compound having at least two double bonds which are copolymerizable with the acrylic acid ester, and at least one cycloalkenyl ester of an acrylic acid. See Tellier column 2, line 47 to column 3, line 65. Nowhere, does Tellier teach or suggest that ethylene can form part of Tellier's polymer. Therefore, Speer and Tellier do not teach or suggest "a terpolymer prepared . . . from ethylene methyl acrylate copolymer."

b. Speer in view of Tellier et al and further in view of Ching et al

Claims 101-104, 110-113, 121, 125-128, 135, 168-180, 182-183 and 186-188 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Speer in view of Tellier et al as applied to claims 99, 100, 105-109, 114-120, 122-124, 129-134, 136-139, 141-167 and 189-194, and further in view of U.S. Patent No. 5,736,616 to Ching et al ("Ching"). For the reasons identified above, Applicants respectfully submit that the combination of Speer in view of Tellier does not form an appropriate argument for obviousness. Furthermore, Ching provides no additional information to remedy the deficiencies of Speer in view of Tellier. Thus, Applicants respectfully submit that the combination of Speer in view of Tellier and further in view of Ching

can not obviate the rejected claims. Applicants respectfully request that this ground for rejection be withdrawn.

3. *Nonstatutory Double-Patenting Rejection*

Claims 99-139, 141-180, 182-183 and 186-194 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-56 of U.S. Patent No. 6,437,086. Applicants respectfully disagree. However, in an effort to expedite allowance of the application, Applicants submit herewith a Terminal Disclaimer directed to U.S. Patent No. 6,437,086. Accordingly, Applicants respectfully request that the rejection of Claims 99-139, 141-180, 182-183 and 186-194 be withdrawn.

Claims 107-139, 141-180, 182-183 and 186-194 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 6,454,965. Applicants respectfully disagree. However, in an effort to expedite allowance of the application, Applicants submit herewith a Terminal Disclaimer directed to U.S. Patent No. 6,454,965. Accordingly, Applicants respectfully request that the rejection of Claims 107-139, 141-180, 182-183 and 186-194 be withdrawn.

Claims 99-139, 141-180, 182-183 and 186-194 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 6,525,123. Applicants respectfully disagree. However, in an effort to expedite allowance of the application, Applicants submit herewith a Terminal Disclaimer directed to U.S. Patent No. 6,525,123. Accordingly, Applicants respectfully request that the rejection of Claims 99-139, 141-180, 182-183 and 186-194 be withdrawn.

Claims 99-139, 141-180, 182-183 and 186-194 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-68 of U.S.

Patent No. 6,527,976. Applicants respectfully disagree. However, in an effort to expedite allowance of the application, Applicants submit herewith a Terminal Disclaimer directed to U.S. Patent No. 6,527,976. Accordingly, Applicants respectfully request that the rejection of Claims 99-139, 141-180, 182-183 and 186-194 be withdrawn.

Claims 99-139, 141-180, 182-183 and 186-194 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 6,610,215. Applicants respectfully disagree. However, in an effort to expedite allowance of the application, Applicants submit herewith a Terminal Disclaimer directed to U.S. Patent No. 6,610,215. Accordingly, Applicants respectfully request that the rejection of Claims 99-139, 141-180, 182-183 and 186-194 be withdrawn.

Claims 99-139, 141-180, 182-183 and 186-194 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of Application No. 09/664,993. Applicants respectfully disagree. However, in an effort to expedite allowance of the application, Applicants submit herewith a Terminal Disclaimer directed to Application No. 09/664,993. Accordingly, Applicants respectfully request that the provisional obviousness-type double patenting rejection of Claims 99-139, 141-180, 182-183 and 186-194 be withdrawn.

Claims 99-139, 141-180, 182-183 and 186-194 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 55-71 of Application No. 09/666,642. Applicants respectfully disagree. However, in an effort to expedite allowance of the application, Applicants submit herewith a Terminal Disclaimer directed to Application No. 09/666,642. Accordingly, Applicants respectfully

request that the provisional obviousness-type double patenting rejection of Claims 99-139, 141-180, 182-183 and 186-194 be withdrawn.

Claims 99-139, 141-180, 182-183 and 186-194 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-33 of Application No. 10/609,050. Applicants respectfully disagree. However, in an effort to expedite allowance of the application, Applicants submit herewith a Terminal Disclaimer directed to Application No. 10/609,050. Accordingly, Applicants respectfully request that the provisional obviousness-type double patenting rejection of Claims 99-139, 141-180, 182-183 and 186-194 be withdrawn.

3. Final remarks

In view of the remarks and amendments set forth above, the Applicants respectfully submit that pending claims 99-139, 141-180, 182-183 and 186-194 are in condition for allowance. The Examiner is invited to contact the undersigned patent attorney at (832) 813-4339 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

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